

What is claimed is:

[1] A cutting device comprising:

a strip shaped metallic thin blade;

a power supply that passes an electric current through the thin blade to cause the thin blade to heat; and

a drive part that causes the thin blade to move in a thickness direction of a member to be cut.

[2] The cutting device of claim 1, further comprising

a non-contact thermometer that measures the temperature of the thin blade without contacting the thin blade, and

a controller that controls the electric current passing through the thin blade on the basis of a temperature detection signal from the non-contact thermometer.

[3] The cutting device of claim 1 or 2, wherein the surface of the thin blade is coated with a low-friction material whose frictional resistance is less than that of the metal configuring the thin blade.

[4] The cutting device of any one of claims 1 to 3, further comprising a tension applying part that applies tension to the thin blade.

[5] The cutting device of any one of claims 1 to 4, further comprising a cutting condition changing part that enables a cutting angle and a diagonal angle to be changed wherein: the cutting angle is an angle formed between a line indicating the moving

direction of the thin blade and a line orthogonal to the thickness direction of the member to be cut; and the diagonal angle is an inclination angle of the thin blade with respect to a direction orthogonal to a longitudinal direction of the member to be cut.

[6] The cutting device of any one of claims 1 to 5, wherein the thin blade is longer than the width of the member to be cut.

[7] A method of cutting a member to be cut using a metallic strip shaped thin blade that has been heated, the method comprising:

using a thin blade that is longer than the width of the member to be cut; and

moving the thin blade when cutting the member with a blade edge longitudinal direction that is slanted  $\theta_b$  degrees with respect to a width direction orthogonal to a longitudinal direction of the member, and with the thin blade slanted at  $\theta_a$  degrees with respect to a direction orthogonal to a thickness direction of the member to be cut.